

In the Claims:

1. (Previously Presented) A method for locking onto a downstream frequency by a wireless modem in a broadband wireless access system comprising:

receiving at a radio coupled to the wireless modem, a plurality of signals at least one corresponding to a downstream signal being transmitted on a downstream frequency;

determining, at the wireless modem, if the radio is locked onto the at least one downstream signal received at the radio;

if the radio is locked onto the downstream signal, determining a center frequency of a detected frequency range corresponding to the downstream signal;

if the radio is not locked onto the downstream signal, changing a receiving frequency of the radio by signals from the wireless modem according to a predetermined frequency plan until the radio is locked onto the one downstream signal and then determining the center frequency of the detected frequency range;

determining a frequency offset factor; and

transmitting an instruction from the wireless modem to the radio to operate a frequency other than the center frequency, the frequency other than the center frequency being a function of the frequency offset factor and center frequency.

2. (Previously Presented) The method of Claim 1, wherein the predetermined frequency plan comprises altering the frequency of the radio by a plurality of steps, each of the steps comprising a first frequency and a second frequency, the first frequency being greater than a predetermined frequency and the second frequency being less than the predetermined frequency.

3. (Original) The method of Claim 2, wherein the first and second frequency are separated from the predetermined frequency by approximately a same distance.

4. (Original) The method of Claim 3, wherein for each frequency step the same distance is approximately a multiple of the same distance of a prior frequency step of the plurality of frequency steps.

5. (Previously Presented) The method of Claim 1, wherein the offset factor is approximately equal to the center frequency divided by a nominal frequency.

6. (Original) The method of Claim 5, wherein the receiver is coupled to a transmitter that transmits upstream signals from the wireless user device, the method further comprising offsetting a transmit frequency of transmitter circuitry located in the wireless user device according the frequency offset factor.

7. (Original) The method of Claim 5, wherein the wireless user device provides signals for upstream transmission to a transmitter that transmits at an upstream frequency, the method further comprising offsetting the upstream frequency according to the offset factor.

8. (Previously Presented) The method of Claim 7, wherein the wireless user device makes correction for the downstream frequency, based on corrections for the upstream frequency that are received from a hub.

9-10. (Canceled)

11. (Original) The method according to Claim 1, wherein:
said method is embodied in a set of computer readable instructions stored on a computer readable media; and

said computer readable instructions, when loaded into a computer and executed, cause the computer to perform the steps of Claim 1.

12. (Canceled)

13. (Currently Amended) A device for locking onto a downstream frequency, comprising:

a radio configured to,

receive a plurality of signals, at least one of said plurality of signals being transmitted on said downstream channel,

lock onto said downstream channel by changing a receiving frequency of the radio by signals from the wireless modem according to a predetermined frequency plan until the radio is locked onto said downstream channel,

detect a center frequency of said downstream channel,

determine an offset of said downstream frequency compared to a nominal frequency, and

adjust a receiving frequency of the radio so the offset is eliminated;

wherein if the radio is not locked onto the downstream signal, changing a receiving frequency of the radio by signals from the wireless modem according to a predetermined frequency plan until the radio is locked onto the one downstream signal and then determining the center frequency of the detected frequency range.

14. (Original) The device according to Claim 13, wherein said radio is further configured to transmit an instruction to a transmitting device to adjust, corresponding to said offset, a frequency on which said downstream channel is being broadcast.

15. (Original) The device according to Claim 13, wherein the frequency adjusted is an output frequency of a frequency generator used by a receiver device of said radio.

16. (Original) The device according to Claim 15, wherein said frequency generator is a PLL of said receiver.

17. (Original) The device according to Claim 13, wherein said radio is part of a wireless modem in a broadband wireless access system.

18-22. (Canceled)

23. (Previously Presented) A device, comprising:

a wireless modem;

a radio coupled to the wireless modem and configured to receive a plurality of signals at least one corresponding to a downstream signal being transmitted on a downstream frequency;

wherein:

the wireless modem is configured to,

determine if the radio is locked onto the at least one downstream signal received at the radio;

if the radio is locked onto the downstream signal, determine a center frequency of a detected frequency range corresponding to the downstream signal;

if the radio is not locked onto the downstream signal, changing a receiving frequency of the radio by signals from the wireless modem according to a predetermined frequency plan until the radio is locked onto the one downstream;

determine a frequency offset factor; and

transmit an instruction from the wireless modem to the radio to operate on a frequency other than the center frequency, the frequency other than the center frequency being a function of the frequency offset factor and center frequency.

24. (Previously Presented) The device according to Claim 23, wherein the downstream signal is a data signal in a broadband wireless access system.

25. (Previously Presented) The device according to Claim 23, wherein the predetermined frequency plan comprises altering the frequency of the radio by a plurality of steps, each of the steps comprising a first frequency and a second frequency, the first frequency being greater than a predetermined frequency and the second frequency being less than the predetermined frequency.

26. (Previously presented) The device according to Claim 23, wherein:
the first and second frequency are separated from the predetermined frequency by approximately a same distance; and

for each frequency step the same distance is approximately a multiple of the same distance of a prior frequency step of the plurality of frequency steps.

27. (Previously presented) The method of Claim 23, wherein the offset factor is approximately equal to the center frequency divided by a nominal frequency.